



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT**

I. HEADING

DATE: May 02, 2007
SUBJECT: Final POLREP for the Outboard Marine Corporation Site, Waukegan, Lake County, Illinois
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POLREP #: POLREP #3 (Final)

II. BACKGROUND

Response Authority:	CERCLA	Site #:	0528
NPL Status:	Listed in NPL	Response Type:	Time Critical
Start Date:	December 14, 2005	CERCLIS ID#:	ILD000802827
Completion Date	January 25, 2007	Incident Category:	Removal Action

III. SITE INFORMATION**A. Site Description**

The OMC Site is located in the city of Waukegan, Lake County, Illinois. The site coordinates are latitude 42°22'8.6" North and longitude 87°49'10.1" West.

The OMC site consists of Plant 1, Plant 2, and various other buildings, as well as land surrounding the buildings. The OMC Plant 2 property consists of 65 acres, on which is located the approximately 1,000,000 square foot former manufacturing plant building and previous activities included aluminum die-casting, metal finishing, metal degreasing, spray painting and shipping/receiving. The Plant 2 Site is bordered by the North Ditch and North Shore Sanitary District to the north, the public beaches of Lake Michigan to the east, by Seahorse Drive and Larsen Marine to the south, and a railroad to the west.

On December 22, 2000, OMC filed for Chapter 11 federal bankruptcy protection and ceased all operations. Bombardier Motor Corporation, a Canadian company, bought OMC product lines and some assets in Plant 2 of February 5, 2001. Bombardier planned to sell, or move to a new facility in Wisconsin, many of the assets it bought. On August 9, 2002, the court entered an order converting the Debtor's case to a Chapter 7 case under the bankruptcy code. The court-appointed Trustee filed a petition to abandon the property on November 15, 2001.

As a result of this pending abandonment and a Resource, Conservation and Recovery Act (RCRA) Preliminary Assessment/Visual Site Inspection (PA/VSI) done at the site in July 2001, in which many hazardous substances were found at the site, the Emergency Response Branch was asked to perform a comprehensive site investigation.

Plant 2 existed for over 50 years, during which it housed various aspects of the manufacture of marine engines. Throughout the 60's and into the 70's, the plant used hydraulic oil containing PCBs in its die casting operations. One of many locations where the oil was recovered from operations was the chip wringer area, where aluminum chips were removed from the oil. In addition, the plant used large amounts of

trichloroethylene (TCE) as a degreaser, and a very large degreaser unit once operated at the site.

On March, 2002, the U.S. EPA and its contractor collected numerous samples from the ambient air, drums and tanks, monitoring wells, sediment from the North Ditch, soil, insulating materials, and surface area (wipe samples) in the plant. Results of the inspection showed the presence of hazardous materials and wastes, including radioactive materials, hydrofluoric acid, metallic mercury, flammable liquids, chlorinated solvents, PCBs (in two dozen large electrical transformers), and asbestos.

As a result of the analytical results of the samples described above that were written in the report entitled "Outboard Marine Corporation: Discovery Site Visit Report", U.S. Department of Justice (DOJ), U.S. EPA's Office of Regional Counsel, along with the State of Illinois Attorney General's Office and the OMC Trustee agreed on a settlement which required the Trustee to take certain actions before it could abandon the site. The required actions included removal of all drums, tanks, and containers, draining and flushing transformers, draining and disposal of all machines, removal of all batteries, and decontamination of all die cast and metal working machines.

Plant 2 was declared abandoned on December 10, 2002 by the Bankruptcy Court.

U.S. EPA conducted waste removal at Plant 2 over a nine week period beginning in May 2003. The completed removal activities included waste removal, floor decontamination, tunnel inspections, soil and groundwater sampling, asbestos removal, and transformer draining. Based on the analytical results from samples collected during the discovery site visit, it was determined that the majority of PCB contamination existed in the older portions of the plant (western portion). Tunnels in the old die cast area were inspected and videotaped to document potential contamination sources. No substantial contaminant releases to the environment were observed in the tunnels. Soil and groundwater were sampled during U.S. EPA removal activities to document releases of contaminants to the environment. Transformers were drained and left disconnected.

Air sampling was conducted to determine air quality inside the Plant 2 building and showed that PCB concentrations in air were still elevated. U.S. EPA removal activities are documented in the report entitled "EPA Removal Action Summary Report" dated December 12, 2003.

Upon abandonment of the Plant 2 property by the OMC Trust on December 10, 2002, U.S. EPA arranged for operation and maintenance of the sediment containment cell treatment system for a period of one year. As of December 10, 2003, arrangements with the City of Waukegan were required to continue these operations.

In 2004, the City of Waukegan contracted Deigan and Associates to perform an environmental site investigation of the easternmost portion of the OMC Plant #2, next to the Lake Michigan shoreline. The sampling area is approximately 13 acres located along the easternmost side of the OMC Plant #2 property. Deigan set up a grid pattern of surface and subsurface borings. Deigan collected soil, sediment, and groundwater samples in July 2004, October 2004, and May 2005. Nine sediment samples were collected from the North Ditch and five samples from the South Ditch. Soil PCB contamination was found in concentrations ranging from 1.2 to 14,000 milligrams per kilogram (mg/kg). PCB contamination was found in sediments at concentrations ranging from 0.068 to 150 mg/kg. The highest soil concentrations were found in the northwest corner of the site near the North Ditch and the east sediment containment cell.

In response to the PCB contamination in the lakefront area, the U.S. EPA and its contractor conducted an environmental assessment to confirm the contamination and further define the extent of PCB contamination. The extent of contamination appeared to be defined along the site fence on the eastern edge of the Plant 2 property, between the east containment cell and the Lake Michigan shore, running south of the North Ditch about 400 feet. Several state-listed endangered plant species were identified by Deigan in the areas to be excavated. U.S. EPA solicited Illinois Department of Natural Resources (IDNR) for guidance on how to preserve state-endangered grass plants during excavation and followed IDNR's process for "endangered species consultation". U.S. EPA START contractor met with the local botanist who had inventoried the local plant species for the IDNR and City of Waukegan to delineate the locations of state-endangered grass plants. The local botanist and IDNR agents provided guidance and methods to protect endangered plants in the excavation areas.

In December 2005, the U.S. EPA and its contractors conducted excavation of soil from the contaminated area between north and south ditches. Prior to excavation, state-endangered plants were removed by hand, following IDNR's guidance, and stored. About 200 feet of South Ditch sediment was also excavated. An excavator removed sediment to a depth of two feet from a section of the South Ditch that corresponded with sample locations in which PCBs were observed at concentrations up to 150 ppm. The excavated sediment was stockpiled with the excavated soil. Following IDNR guidance, topsoil mix, consisting of 70% clean sand and 30% double-screened compost, was trucked in and spread to a depth of four to six inches over all of the north and half of the south excavation. Topsoil saved at the beginning of excavation activities was replaced over half the south excavation and topsoil mix was spread over the remaining excavated areas. The topsoil was smoothed and contoured to match the original grade as closely as possible. The state-endangered grass plants were removed from storage and replanted in the eastern portion of the south excavation. Approximately 9,743 tons of contaminated soil was transported during May 2006 and disposed of at the Onyx Zion Landfill. The replanted endangered grass plants were observed to be viable, with at least 85 percent of the plants showing new, green growth.

In July 2006, the Settling Defendants for the adjacent "Waukegan Coke Plant Superfund Site" were planning to build a water treatment plant in the contaminated part of the OMC building. U. S. EPA's Remedial Project Manager requested assistance from the Emergency Response Branch to clean the sewer's lines as the result of sampling showing PCB concentrations as high as 130 ppm in sludge found in the line. The purpose of this removal action is to clean the sewer line and keep it free from contamination because of the intended discharge of "non-contact" cooling water that is planned to be discharged from the water treatment plant to Lake Michigan.

IV. SITE INFORMATION

A. Current Activities

During the week of August 14, 2006, U.S. EPA, ERRS and START mobilized to the site. Water was pumped out from the sewer and south ditch (lagoon) using tank trucks and temporarily stored in storage tanks. Storage tanks (fract tanks) and carbon filtration drums were staged at the northwest corner of the facility behind the OMC buildings. Ground water was found to be seeping into the lagoon area at a constant flowrate. So, water from lagoon and sewer was pumped out everyday before removing sludge from sewer. ERRS set up the water treatment plant near the fract tanks. START collected wipe samples from the sludge tank and water tank trucks to ensure that these equipments were free of PCB contamination when they were mobilized to the site. The analytical results for PCBs were below detection limits for all samples.

During the week of August 21, 2006, ERRS pumped water and sludge out from the sewer line and manholes, between OMC building and the south ditch, using vacuum tanker and sludge tanker. Water from the trucks was unloaded and temporarily stored in the fract tank and later treated using carbon filtration drums. The treated water was discharged into a storm sewer. START collected a water sample after it was treated by the filtration systems. The analytical results for PCBs were below detection limit of 33 micrograms per liter for the water sample. An excavator was used to mix the sludge with cleanup soil, which is a PCB contaminated soil from previous removal action. Sludge collected into sludge tank was discharged into the sludge treatment area, which is a former concrete secondary containment location, and was mixed with cleanup soil using the excavator. After removing sludge from the sewer, ERRS subcontractor sprayed a low pH chemical solution into the sewer line to remove any remaining PCBs from the sewer walls. Sewer line was rinsed with fresh water after applying PCB cleanup solution. The rinsed water was pumped out using sludge tanker and stored in fract tanks for treatment. The trucks were decontaminated and wipe samples were collected and analyzed for PCBs to confirm that the trucks were free of PCBs. START collected a composite surface grab sediment sample from the lagoon area. Surface grab sediment sample had 966 micrograms of PCBs per kilogram ($\mu\text{g/kg}$). This result was comparable to the PCB levels reported for the samples collected by the City of Waukegan from the lagoon.

A total of approximately 60 tons of low level PCB-contaminated non-TSCA waste was transported to the Veolia Onyx Zion Landfill located in Zion, IL for disposal

ERRS and START demobilized from the site on August 28, 2006.

On December 11, 2006, United States Environmental Protection Agency (U.S. EPA), Emergency and Rapid Response Services (ERRS) contractor, and Superfund Technical Assessment and Response Team (START) conducted a site walk-through with potential subcontractors for the transformer removal activities.

During the week of January 22, 2007, U.S. EPA, ERRS, ERRS Subcontractor and START mobilized to the site. Transformers stored in the OMC Plant No.2 building were shipped out in trucks. Transformers which were located on top of the roof were pulled down by a crane and safely shipped off to Clean Harbors facility located near Cleveland, OH. Transformers will be cleaned and metal parts will be recycled. START collected wipe samples from the roof and transformers. The analytical results were below the detection limits for PCBs. One of the four transformers on the roof of OMC Plant No.2 was not removed because of the difficulty in accessing it by a crane as the transformer is located in the middle, approximately about 150 feet from the closest edge. This transformer would have to be removed at a later stage. A total of 21 transformers were removed and disposed from the site.

B. Planned Removal Activities

None.

C. Next Steps

None.

D. Key Issues

One of the four transformers on the roof of OMC Plant No.2 was not removed because of the difficulty in accessing it by a crane as the transformer is located in the middle, approximately about 150 feet from the closest edge. This transformer would have to be removed at a later stage.

E. Estimated Costs as of May 02, 2007

	CEILING	COSTS TO DATE
START	\$ 18,000	\$
ERRS	\$ 100,000	\$

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

V. DISPOSITION OF WASTES

WASTE TYPE	DATE SHIPPED	QUANTITY	DISPOSAL METHOD	DISPOSAL FACILITY/COMPANY
<i>Low Level PCB-contaminated non-TSCA Waste</i>				
	05/17-19/06	10,000 lb T	Disposed	Veolia Onyx Zion Landfill
	08/28/06	60lb T	Disposed	Veolia Onyx Zion Landfill

<i>PCB Containing Transformers (Empty)</i>				
	01/22/07	17.38lb T	Recycled	Clean Harbors PPM LLC
	01/23/07	16.11lb T	Recycled	Clean Harbors PPM LLC
	01/23/07	13.88lb T	Recycled	Clean Harbors PPM LLC
	01/24/07	17.38lb T	Recycled	Clean Harbors PPM LLC
	01/24/07	3.2lb T	Recycled	Clean Harbors PPM LLC
	01/25/07	16.06lb T	Recycled	Clean Harbors PPM LLC